

- 15 -

**Claims:**

1. A process for the rapid liquid-chromatographic separation and identification of substances, characterized in that mixtures of substances are pre-separated in the first stage of a software-controlled rapid liquid-chromatographic two-stage separation, the pre-separated fractions deposited in collecting columns are subjected to a parallel fine separation in at least two separation lines in the second stage, and the finely separated fractions are identified and isolated in parallel operations each time.
2. The process according to claim 1, characterized in that the pre-separation of mixtures of substances is performed consecutively in the first separation stage, and fine separation in the second stage is performed consecutively and/or in parallel.
3. The process according to claim 1 or 2, characterized in that at least one detector (14.1) is used both after the first separation stage and after the second separation stage.
4. The process according to any of claims 1 to 3, characterized in that the substances separated and isolated in the separation lines are subjected to an additional purification procedure, particularly an adsorptive purification.
5. A device for the rapid liquid-chromatographic separation and identification of substances, said device consisting of a plurality of separation columns and col-

- 16 -

lecting columns, as well as feed systems, detectors, and fraction collectors, the interaction of which can be controlled through a central control unit, characterized in that a plurality of parallel liquid-chromatographic separation lines, each one consisting of a combination of separation column batteries (11, 12, 13) and collecting column batteries (7, 8, 9), detector units (14), and fraction collector units (15), are arranged downstream of at least one separation column (10), that a pump unit (2) consisting of three pumps (2.1, 2.2, 2.3) to convey the mobile phase is functionally connected both with the separation column (10) and the separation lines, and that software-switchable multi-way valves are arranged between the individual functional units.

6. The device according to claim 5, characterized in that each separation line has a multi-way valve (3.5, 3.6, 3.7) arranged upstream thereof.
7. The device according to claim 5 or 6, characterized in that additional collecting columns are arranged downstream of the separation lines.